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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/775,170

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EXAMINER

TYLER, NATHAN K

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/775,170	<b>Applicant(s)</b> SUGIZAKI, MAKOTO	
	<b>Examiner</b> NATHAN K. TYLER	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) 3,5-7,9-21,23,24 and 26-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,8 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed 03 March 2008, with respect to the rejection of claim 22 under 35 U.S.C. 101 have been fully considered and are persuasive. The rejection of claim 22 under 35 U.S.C. 101 has been withdrawn.

2. Applicant's arguments regarding claim 1 have been fully considered but they are not persuasive.

Applicant argues that Kashiara does not disclose "halftone dots having sizes according to tone values."

In response to applicant's arguments, the recitation "halftone dots having sizes according to tone values" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

3. Applicant's arguments regarding claim 2 have been fully considered but they are not persuasive.

Applicant argues that Kashihara does not disclose "the halftone dot conversion section always scatters the blanks of the drawing pixels about the halftone dots, at associated positions, respectively, regardless of the tone values."

In response, the Examiner respectfully disagrees. As previously stated, the tone values disclose by Kashihara range from 0 to 15. The threshold matrix shown in Fig. 5 shows that the threshold for the bottom right corner is 16, which will never be reached. Therefore, as shown in Fig. 17, the four blank pixels indicated at tone level 15 will always be blank at that position. There is no time that all pixels will be filled.

4. Applicant's arguments regarding claim 4 have been fully considered but they are not persuasive.

Applicant argues that Kashihara does not disclose "geometry of halftone dots" as recited in claim 4.

In response, the Examiner respectfully disagrees. Claim 4 recites "geometry of halftone dots using a dot matrix defining halftone dots by an arrangement of thresholds to be compared with the tone values." Such an arrangement of thresholds to be compared with the tone values is shown in Fig. 5.

5. Applicant's arguments regarding claim 8 have been fully considered but they are not persuasive.

Applicant argues that Kashiwara does not disclose “a plurality of halftone dot conversion systems.”

In response, the Examiner respectfully disagrees. The processing circuitry shown in Fig.1 is capable of implanting any of the plurality of halftone dot conversion schemes shown in Figs. 6, 17, and 20.

### ***Election/Restrictions***

6. Newly submitted claims 27-29 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The new limitation of a mask added by claims 27-29 requires a different field of search than the originally presented claims.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 27-29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2625

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4, and 25 rejected under 35 U.S.C. 102(b) as being anticipated by Kashihara (US 5742317 A).

Regarding **claim 1**, Kashihara discloses a halftone dot conversion apparatus comprising: a tone value obtaining section that obtains tone values of the tone image data (“As shown in FIGS. 3 and 4, the interpolation circuit 18 refers to the image signals of the peripheral pixels around a target pixel M and converts into signals a, b, c, and d in which the densities in the main scan and sub scan directions are twice as large as those of the image signal for the target pixel M” at column 10, line 50); and a halftone dot conversion section that forms the halftone dots by sets of drawing pixels number of which is associated with the tone values obtained by the tone value obtaining section (“The above conversion is executed by comparing the output data of the shift register 12 and a plurality of predetermined dot patterns” at column 10, line 55. Fig. 5 shows the determination for a number of drawing pixels), and scatters blanks of the drawing pixels about the halftone dots, on at least a predetermined range of tone values (Fig. 17 shows 4 blank pixels for all 16 tone values ranging from 0 (not shown in Fig. 17, refer to Fig. 6) to 15).

Regarding **claim 2**, Kashihara discloses that the halftone dot conversion section always scatters the blanks of the drawing pixels about the halftone dots, at associated positions, respectively, regardless of the tone values (As stated in the grounds for rejection for claim 1, Fig.

17 shows 4 blank pixels for all 16 tone values ranging 0-15. Kashihara states that the tone values range from 0 to 15 at column 11, line 9).

Regarding **claim 4**, Kashihara discloses that the halftone dot conversion section determines geometry of halftone dots using a dot matrix defining halftone dots by an arrangement of thresholds to be compared with the tone values (Fig. 5 shows the dither matrix containing threshold values. The resulting halftone dots shown in Fig. 17 are the result of the matrix shown in Fig. 5 being repeated to create an 8x8 matrix).

Regarding **claim 25**, Kashihara discloses a dot matrix comprising: a first threshold group defining a set geometry according to the tone values (see Fig. 5); and a second threshold group defining blanks scattering inside the set geometry defined by the first threshold group on tone values in at least a predetermined range (Fig. 17 shows all tone values with 4 blank pixels, the blank pixels corresponding to a threshold value of 16 (out of range 0-15) as shown in Fig. 5).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashihara.

Regarding **claim 8**, Kashihara discloses that the halftone dot conversion section has a plurality of halftone dot conversion systems (systems shown in Figs. 6, 17, 20) including a first halftone dot conversion system that forms the halftone dots by sets of drawing pixels number of which is associated with the tone values obtained by the tone value obtaining section, and scatters blanks of the drawing pixels about the halftone dots, on at least predetermined range of tone values (see grounds for rejection for claim 1). While Kashihara does not explicitly disclose that the halftone dot conversion section uses the first halftone dot conversion system of the plurality of halftone dot conversion systems, on image data for an ink jet printer, Kashihara does state that the system is used on image data for "a laser beam printer or the like" (column 1, line 7). It would have been obvious at the time the invention was made to one of ordinary skill in the art to use the halftone dot conversion system disclosed by Kashihara in an inkjet printer, as inkjet printers are inexpensive and widely used, and image data for inkjet printers must also undergo halftone dot conversion [official notice].

Regarding **claim 22**, while Kashihara discloses obtaining tone values of the tone image data from a tone value obtaining section; forming the halftone dots by sets of drawing pixels number of which is associated with the tone values obtained by the tone value obtaining section from a halftone dot conversion, and scattering blanks of the drawing pixels about the halftone dots, on at least a predetermined range of tone values (see grounds for rejection for claim 1), Kashihara does not disclose this being implemented using a program stored on a computer readable medium. It would have been obvious at the time the invention was made to one of ordinary skill in the art to implement the halftone dot conversion system disclosed by Kashihara



using software code stored in a computer readable medium, as image processing functions are more easily and cheaply implemented using software [official notice].

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN K. TYLER whose telephone number is (571)270-1584. The examiner can normally be reached on M-F 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/  
Supervisory Patent Examiner, Art Unit 2625

/Nathan Tyler/  
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